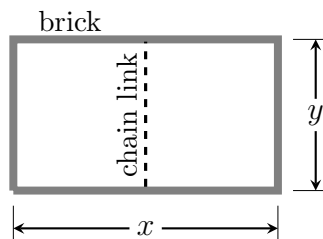


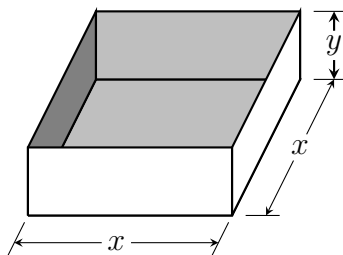
Name: _____

1. A total area of 2000 square feet is to be enclosed by two pens, as illustrated. The outside walls will be made of brick, and the inner dividing wall is chain link. The brick wall costs \$10 per foot, and the chain link costs \$5 per foot. Find the dimensions x and y that minimize the cost of construction.



Name: _____

1. You need to build a square concrete-lined pool having a box-like shape and a volume of 500 cubic feet.



In order to minimize costs you want the (concrete-lined) surface area to be as small as possible. What dimensions x and y result in a volume of 500 cubic feet, but with the smallest possible surface area?